NWS FORM E-5 U. S. DEPARTMENT OF COMMERCE | HSA OFFICE: RNK
NOAA, NATIONAL WEATHER SERVICE BLACKSBURG, VA

MONTHLY REPORT OF RIVER/FLOOD CONDITIONS

TO: NATIONAL WEATHER SERVICE
HYDROMETEOROLOGICAL INFO CENTER
1325 EAST-WEST HIGHWAY
SILVER SPRING, MD 20910

REPORT FOR: **February 2010**

Date: 3/16/10

Signature: Peter Corrigan

Summary: Despite an ongoing strong El Niño event, the active storm track over the southern tier of states relaxed during the month leading to slightly below normal precipitation in February 2010. The only flooding in the Blacksburg Hydrologic Service Area (HSA) was a minor river flood event affecting the Dan River basin early in the month. Mean February precipitation was 2.78 inches versus the long-term average (1971-2000 normal) for this month of 3.22 inches (73 of the 75 cooperative stations reporting), or 86 percent of average. Precipitation at NWS stations ranged from a low of 1.50" at Kerrs Creek (KCKV2) in Rockbridge County, VA to a high of 4.16" at Boone 1SE (BOON7) in Watauga County, NC. Monthly average temperatures were well below normal by about 3 to 8 degrees ranging from a low of 27.9^{o}F at Blacksburg (-5.6^{o}) to a high of 36.1^{o}F at Danville (-3.6^{o}). At all five climate observing sites it was the coldest February since 1979 or 1980 and ranked within the top 10 coolest months of February.

The month kicked off with a series of storms, beginning with a light to moderate precipitation event on February 2-3 as low pressure tracked from Florida along the southeast coast. Mostly snow fell in the mountains with generally 2 to 5 inches accumulating, while the piedmont areas had mostly rain. Precipitation totals ranged from 0.50 to over 1.0 inch in the North Carolina mountains and along portions of the Blue Ridge. This system was followed in quick succession on the 5th-6th by a stronger low pressure area of the Miller 'B' type with complex a double-barreled low over the Ohio Valley and then redeveloping along the southeast coast. This storm brought more widespread precipitation to the HSA, heavy snow in most of the mountains and mixed precipitation in the piedmont. Snow amounts ranged from 6 to 12 inches across the mountains, with the exception of the far west where warmer air mixed in and caused a changeover to rain. Most of the piedmont picked up about 2 to 4 inches of snow, except for the northern piedmont counties that received closer to 8 inches. Liquid equivalents from the storm, including rain, sleet, freezing rain and snow ranged from 0.50 inches in the west to nearly 2.00 inches in the southeast. Runoff from the rains over the southeast led to the only river flooding of the month as the Dan River reached flood yet again from Danville to South Boston (see E-3 table below). Fortunately the flooding was just into the minor range at all three forecast points along the river. A third storm within a week affected the area February 9-10 as a complex low pressure area emerged from the Tennessee Valley and moved across Virginia bringing mixed precipitation to the region. The higher elevation mountains, generally over 3,000 feet of received over a foot of new snow, while lower elevations such as the New River Valley had much less, mostly less than 4 inches. Precipitation in the piedmont and

foothills was nearly all rain with storm total precipitation was generally from 0.25 to 0.50 inches. The storm was followed by an extended period of cold northwest flow bringing periods of heavy snow to the favored upslope areas in the western HSA and persistent snow showers and flurries across the rest of the mountains.

The remainder of February was not very notable in hydrologic terms with only a few light precipitation events and a continuation of cold temperatures. Snow cover remained on the ground for the entire month after the storm on the 3rd in most of the mountains. It was also the longest period (since 1959) of continuous snow cover (1 inch or more) in Blacksburg, at 73 days. At the end of the month snow water equivalents ranged from 1ess than 1 inch in the foothills to well over 5 inches in the upper Greenbrier River basin. Spring flood outlooks issued in February highlighted above normal flood potential based primarily on the significant snowpack in place.

Winter Summary (December-February)

The cold and snowy winter of 2009-2010 will be remembered as such for a long time. In terms of precipitation it was the 4th wettest at Roanoke (14.90"), 7th at Lynchburg (11.18"), 8th at Blacksburg (12.75), and 9th at Lynchburg (13.90"). Only a relatively dry February kept some stations from setting new winter precipitation records. Snow amounts were impressive as well with Bluefield setting a new record for snowiest winter at 79.5", while Blacksburg was 2nd (52.1"), Lynchburg 4th (34.0"), and Roanoke 5th (42.6"). It was also quite cold, with Blacksburg (29.5^{o}F), Bluefield (30.5^{o}F), Lynchburg (33.3^{o}F) and Danville (36.8^{o}F) all recording top ten coolest winters on record. Roanoke (34.7^{o}F) finished with its 11th coolest winter on record. Despite the cold each month had at least some river flooding with a widespread river and flash flooding event in late January, There was even a rare ice jam flood on the New River in January.

Non-Routine Hydrologic Product Summary (Feb):

Flood/Flash Flood Watches (FFARNK): 0
Flood Advisories (Urban/Small Stream - FLSRNK): 0
Flash Flood Warnings (FFWRNK): 0
Areal Flood Warnings (FLWRNK): 0
River Flood Warnings (FLWRNK - forecast points): 3

NWS FORM E-3	U.S. DEPARTMENT OF COMMERCE NOAA, NATIONAL WEATHER SERVICE	HYDROLOGIC SERVICE AREA: **Blacksburg, VA (RNK)**
	FLOOD STAGE REPORT	MONTH: **February** YEAR: **2010**

RIVER AND STATION	FLOOD STAGE (FEET)	ABOVE FLOOD STAGE		CREST		
		FROM	TO	STAGE (FEET)	DATE	TIME (UTC)
Dan River						
Danville (DVLV2)	17	2/6/10	2/8/10	17.65	2/6/10	2015
Paces (PCEV2)	20	2/6/10	2/8/10	21.38	2/6/10	1500
South Boston (SBNV2)	19	2/6/10	2/9/10	23.93	2/8/10	0100

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